CDF Operations

February 10, 2003   Matthew Jones
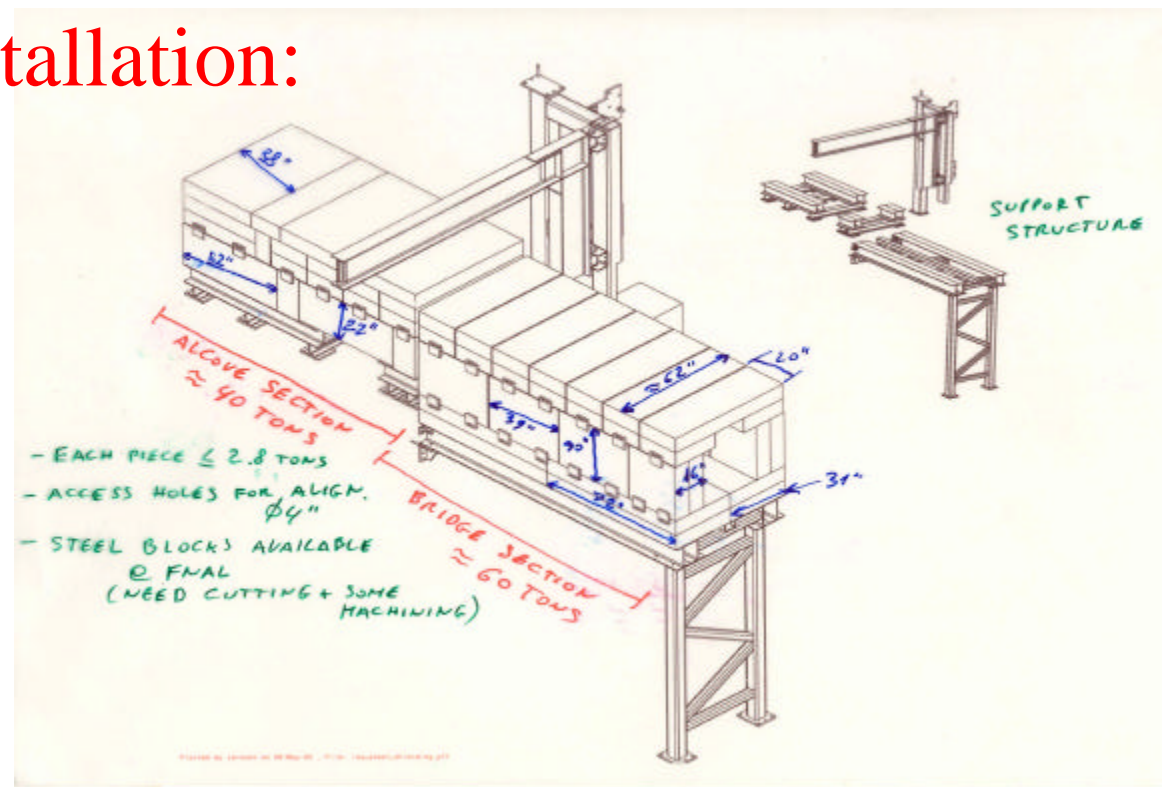
- **Work during extended shutdown**
- **Plans for startup**

We used the extra week for various tasks:

- Installation of crane on east side for future shielding installation:

Additional shutdown work

- Long cosmic runs – all high voltage on:
  - ✓ No problems with COT or TOF HV

- Upgrade of slow control software

- Lots of single-channel fixes:
  - ✓ Hot PMT in EM calorimeter
  - ✓ Grounding on forward muon scintillator
  - ✓ Single channels on central muon chambers
  - ✓ Stuck low-order trigger bits

- Trigger development…

Trigger development

- **"Readout Lists":**
  - ➢ Selective formatting and readout of front-end data banks
  - ➢ Targets diagnostic trigger banks or information that can be regenerated offline
  - ➢ Significantly reduces data volume and readout times
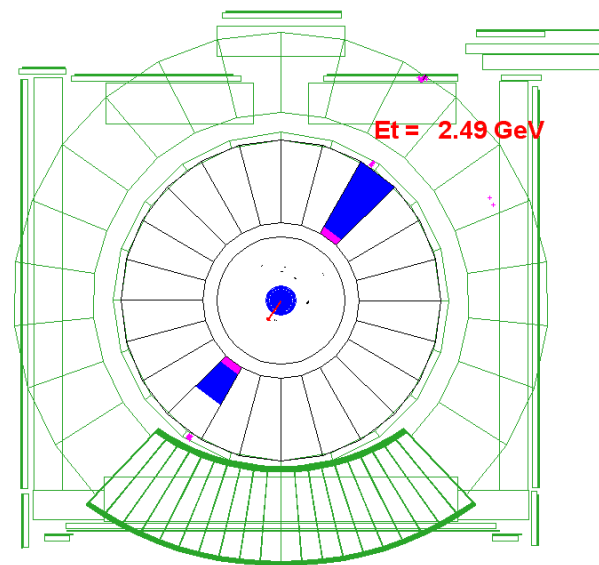   for some crates

  Example: L2 decision bank was 3 kb, now averages 700 bytes.
  - ➢ Installed in 7 out of 8 trigger "partitions"
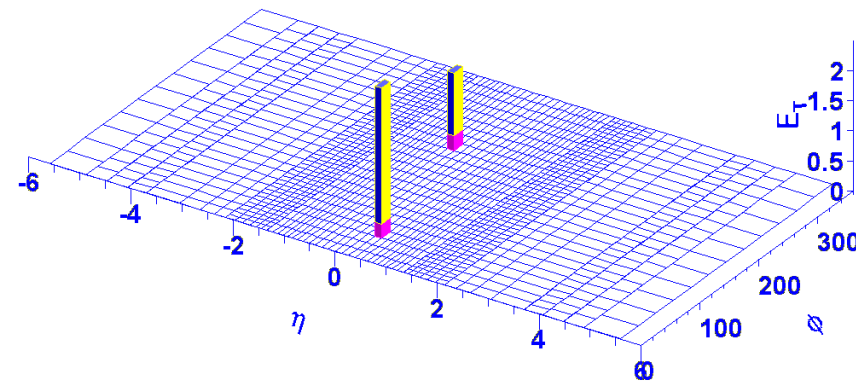 - ➢ Needs further tests with beam for final checkout

Trigger development

- ## Time-of-Flight trigger
  - ➢ Motivated by direct searches for highly ionizing particles (eg. Monopoles)
  - ➢ Also provides a convenient cosmic trigger:
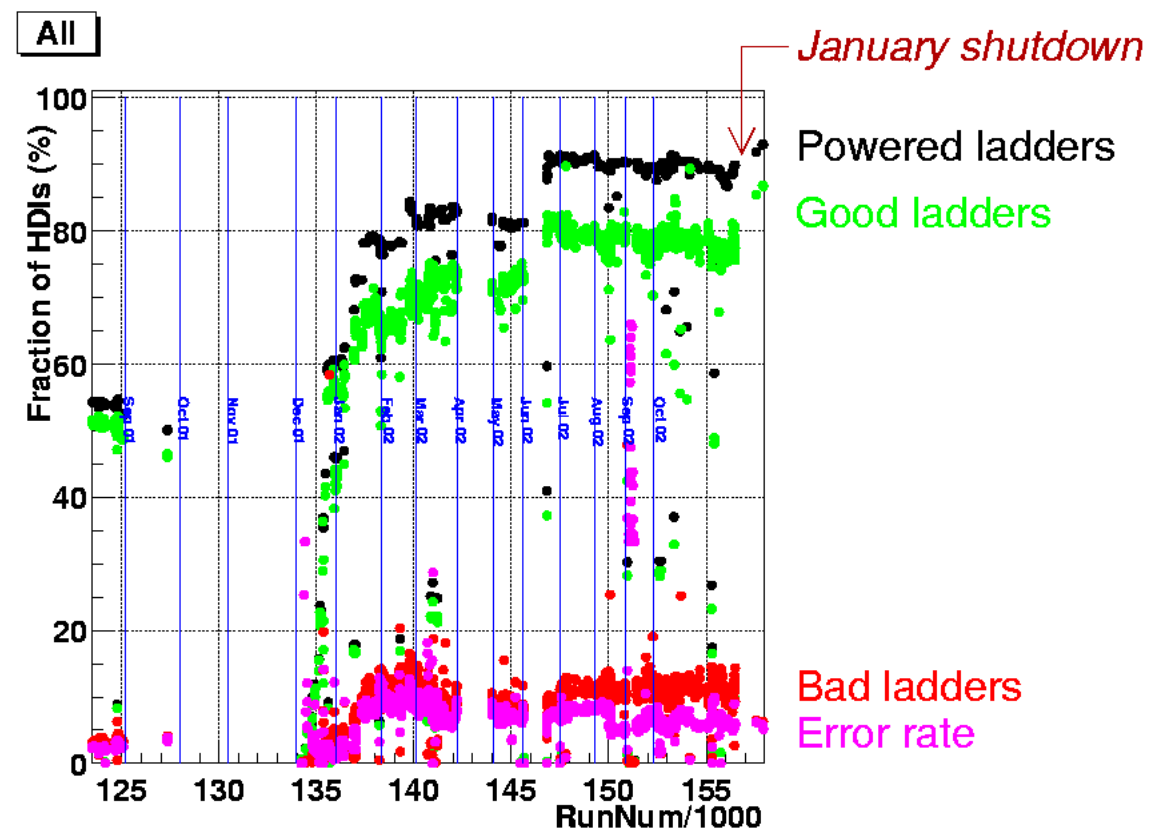

(Chamber HV was not on)

Silicon maintenance

- Read out silicon detector with cosmics – visible improvements from work during shutdown.

Start up plan

- Silicon will remain off initially
  - ➢ Don't know what the beam conditions will be like
- Luminosity needs to be calibrated
  - ➢ PMT's in west luminosity monitor replaced
  - ➢ Need minimum bias data to set gains
  - ➢ Should take about ½ hour of first store
- Start with December trigger configuration
- Imminent developments:
  - ➢ New level 3 trigger executable – includes Silicon tracking
  - ➢ Reduction of data volume out of level 3
- Looking forward to taking data again!